

MISCELLANEOUS.

A Classification of the Sponges. By Professor SOLLAS, D.Sc.

THE Porifera are a distinct phylum (Parazoa) of the animal kingdom, divisible into two classes, namely :—

- I. Plethospongiæ ($\pi\lambda\eta\theta\sigma$, a crowd).
- II. Calcispongiæ.

The Plethospongiæ may be subdivided into three orders :—

- i. Hexactinellidæ.
- ii. Demospongiæ ($\delta\eta\mu\sigma$, the common people).
- iii. Myxospongiæ.

The Demospongiæ embrace the great majority of sponges, and are divisible into two suborders, the Monaxonidæ and Tetractinellidæ. The horny sponges may be added as a third suborder, the Cerospongiæ; but since they are probably of polyphyletic origin, derived from different families of the Monaxonidæ, it is open as an alternative to distribute them among the families of that group.

On the Pelagic Annelides of the Bay of Algiers.

By M. C. VIGUIER.

From November 1884 to June 1885 I made daily investigations at the entrance of the port of Algiers, for the purpose of studying the pelagic fauna of the bay, and especially the Annelida.

It is well known that the pelagic Annelida are divided into several groups. Some, like the Heteronereids or Syllidiæ, without alternate generations, only belong to the surface-fauna during the short period of sexual activity. Others are pelagic during their whole existence; but this existence, which is very short, only represents the same period of activity as in the preceding group; they are the sexual stolons of the Syllidiæ with alternate generations, the *Polylostrichi* and *Saccoreneides*. Lastly, a third group includes essentially pelagic creatures which have never been observed except at the surface, and appear to be completely adapted for that mode of life. From my observations all these organisms belong to the two families Alcipiæ and Phyllodociæ, for we can only regard as very greatly modified Phyllodociæ, on the one hand *Tomopteris*, and on the other the curious *Sagittellæ*. Considering the close affinity which exists between the families Alcipiæ and Phyllodociæ, which were formerly confounded, one might be surprised that *all* the animals composing the former being pelagic, there was only known with certainty *a single* pelagic Phyllodocian, namely *Hydrophanes* of Claparède. For good reasons I do not mention *Lopadorhynchus*, Grube. Three other types of this family had, however, been seen,